



SEQUENCE LISTING

<110> Billy F. McCutchen et al.

<120> SCORPION TOXINS

<130> BB1208PCT

<140> 09/807,248

<141> 2001-04-09

<150> 60/105,404

<151> 1998-10-23

<160> 17

<170> Microsoft Office 97

<210> 1

<211> 228

<212> DNA

<213> Leiurus quinquestriatus

<400> 1

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ccgaaaactg tgtctaccat tgcattccag attgcgacac gttatgtaag gataacgggtg 120
gtacgggtgg ccattgcgga tttaaacttg gacacggaat tgcctgctgg tgcaatgcct 180
tgcccgataa tgtagggatt atagttgatg gagtaaaatg tcataaag 228
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<210> 2

<211> 75

<212> PRT

<213> Leiurus quinquestriatus

<220>

<221> SIGNAL

<222> (1)..(11)

<400> 2

```
Leu Ala Leu Leu Phe Met Thr Gly Val Glu Ser Val Arg Asp Gly Tyr
  1              5              10              15
```

```
Ile Ala Gln Pro Glu Asn Cys Val Tyr His Cys Ile Pro Asp Cys Asp
      20              25              30
```

```
Thr Leu Cys Lys Asp Asn Gly Gly Thr Gly Gly His Cys Gly Phe Lys
    35              40              45
```

```
Leu Gly His Gly Ile Ala Cys Trp Cys Asn Ala Leu Pro Asp Asn Val
    50              55              60
```

```
Gly Ile Ile Val Asp Gly Val Lys Cys His Lys
    65              70              75
```

<210> 3

<211> 238

<212> DNA

<213> Leiurus quinquestriatus

<220>

<221> unsure

<222> (28)

<223> n=A, C, G, or T

<400> 3

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tagtttggca cttctcttca tgacaggngt ggagagtgtg cgtgacgggt atattgccaa 60
gcccgaacac tgtgcacacc attgctttcc aggttcctcc ggttgcgaca cattatgtaa 120
ggaaaacggt ggtacgggtg gccattgcgg atttaaagtt ggacatggaa ctgcctgctg 180
gtgcaatgcc ttgcccgata aagtagggat tatagtagat ggagtaaaat gccatcgc 238
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<210> 4

<211> 79

<212> PRT

<213> *Leiurus quinquestriatus*

<220>

<221> SIGNAL

<222> (1)..(12)

<400> 4

```
Ser Leu Ala Leu Leu Phe Met Thr Gly Val Glu Ser Val Arg Asp Gly
  1             5             10             15
```

```
Tyr Ile Ala Lys Pro Glu Asn Cys Ala His His Cys Phe Pro Gly Ser
             20             25             30
```

```
Ser Gly Cys Asp Thr Leu Cys Lys Glu Asn Gly Gly Thr Gly Gly His
      35             40             45
```

```
Cys Gly Phe Lys Val Gly His Gly Thr Ala Cys Trp Cys Asn Ala Leu
      50             55             60
```

```
Pro Asp Lys Val Gly Ile Ile Val Asp Gly Val Lys Cys His Arg
      65             70             75
```

<210> 5

<211> 258

<212> DNA

<213> *Leiurus quinquestriatus*

<400> 5

```
atgaatcatt tggtaatgat tagtttggca cttcttttca tgacagggtg ggagagtggg 60
gtacgtgatg ggtatattgc ccagcccgaa aactgtgtct accattgctt tccagggtcc 120
cccggttgcg acacattatg taaagagaac ggtgcttcga gtggccattg cggatttaaa 180
gaaggacacg gacttgcttg ctggtgcaat gatctgcccc ataaagtagg gataatagta 240
gaaggagaaa aatgccat                                     258
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<210> 6

<211> 87

<212> PRT

<213> *Leiurus quinquestriatus*

<220>

<221> SIGNAL

<222> (1)..(19)

<400> 6

```
Met Asn His Leu Val Met Ile Ser Leu Ala Leu Leu Phe Met Thr Gly
  1             5             10             15
```

```
Val Glu Ser Gly Val Arg Asp Gly Tyr Ile Ala Gln Pro Glu Asn Cys
      20             25             30
```

Val Tyr His Cys Phe Pro Gly Ser Pro Gly Cys Asp Thr Leu Cys Lys
35 40 45

Glu Asn Gly Ala Ser Ser Gly His Cys Gly Phe Lys Glu Gly His Gly
50 55 60

Leu Ala Cys Trp Cys Asn Asp Leu Pro Asp Lys Val Gly Ile Ile Val
65 70 75 80

Glu Gly Glu Lys Cys His Lys
85

<210> 7

<211> 85

<212> PRT

<213> Buthus occitanus

<400> 7

Met Ser Ser Leu Met Ile Ser Thr Ala Met Lys Gly Lys Ala Pro Tyr
1 5 10 15

Arg Gln Val Arg Asp Gly Tyr Ile Ala Gln Pro His Asn Cys Ala Tyr
20 25 30

His Cys Leu Lys Ile Ser Ser Gly Cys Asp Thr Leu Cys Lys Glu Asn
35 40 45

Gly Ala Thr Ser Gly His Cys Gly His Lys Ser Gly His Gly Ser Ala
50 55 60

Cys Trp Cys Lys Asp Leu Pro Asp Lys Val Gly Ile Ile Val His Gly
65 70 75 80

Glu Lys Cys His Arg
85

<210> 8

<211> 252

<212> DNA

<213> Leiurus quinquestriatus

<220>

<221> unsure

<222> (16)

<223> n=A, C, G, or T

<400> 8

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cgtgatgctt atattgccca gaactataac tgtgtatatc attgtgcttt aaatccatat 120
tgcaacgatt tatgtaccaa gaacggtgct aagagtggct attgccaatg gttcggttca 180
agtggaaacg cctgctggtg catagatttg cccgataacg taccgattaa agtaccagga 240
aaatgccatc gc 252

<210> 9

<211> 84

<212> PRT

<213> Leiurus quinquestriatus

<220>

<221> SIGNAL

<222> (1) .. (19)

<220>

<221> UNSURE

<222> (6)

<223> Xaa=ANY AMINO ACID

<400> 9

Met	Asn	Tyr	Leu	Val	Xaa	Ile	Ser	Leu	Ala	Leu	Leu	Leu	Met	Thr	Gly
1				5					10					15	

Val	Glu	Ser	Gly	Arg	Asp	Ala	Tyr	Ile	Ala	Gln	Asn	Tyr	Asn	Cys	Val
			20					25					30		

Tyr	His	Cys	Ala	Leu	Asn	Pro	Tyr	Cys	Asn	Asp	Leu	Cys	Thr	Lys	Asn
		35					40					45			

Gly	Ala	Lys	Ser	Gly	Tyr	Cys	Gln	Trp	Phe	Gly	Ser	Ser	Gly	Asn	Ala
	50					55					60				

Cys	Trp	Cys	Ile	Asp	Leu	Pro	Asp	Asn	Val	Pro	Ile	Lys	Val	Pro	Gly
65					70					75					80

Lys Cys His Arg

<210> 10

<211> 65

<212> PRT

<213> Buthus occitanus tunetanus

<400> 10

Gly	Arg	Asp	Ala	Tyr	Ile	Ala	Gln	Pro	Glu	Asn	Cys	Val	Tyr	Glu	Cys
1				5					10					15	

Ala	Gln	Asn	Ser	Tyr	Cys	Asn	Asp	Leu	Cys	Thr	Lys	Asn	Gly	Ala	Thr
			20					25					30		

Ser	Gly	Tyr	Cys	Gln	Trp	Leu	Gly	Lys	Tyr	Gly	Asn	Ala	Cys	Trp	Cys
		35					40					45			

Lys	Asp	Leu	Pro	Asp	Asn	Val	Pro	Ile	Arg	Ile	Pro	Gly	Lys	Cys	His
	50					55					60				

Phe

65

<210> 11

<211> 256

<212> DNA

<213> Leiurus quinquestriatus

<400> 11

atgaaactct	tacttttact	cattgtctct	gcttcaatgc	tgattgaaag	cttagttaat	60
gctgacggat	atataagaag	aaaagacgga	tgcaagggtg	catgcctggt	cggaaatgac	120
ggctgcaata	aagaatgcaa	agcttatggt	gcctattatg	gatattggtg	gacctgggga	180
cttgctgct	ggtgcgaagg	tcttccggat	gacaagacat	ggaagagtga	aacaaacaca	240
tgcggtggca	aaaagt					256

<210> 12

<211> 85
<212> PRT
<213> Leiurus quinquestriatus

<220>
<221> SIGNAL
<222> (1)..(21)

<400> 12
Met Lys Ile Ile Ile Phe Leu Ile Val Ser Ser Leu Met Leu Ile Gly
1 5 10 15
Val Lys Thr Asp Asn Gly Tyr Leu Leu Asn Lys Ala Thr Gly Cys Lys
20 25 30
Val Trp Cys Val Ile Asn Asn Ala Ser Cys Asn Ser Glu Cys Lys Leu
35 40 45
Arg Arg Gly Asn Tyr Gly Tyr Cys Tyr Phe Trp Lys Leu Ala Cys Tyr
50 55 60
Cys Glu Gly Ala Pro Lys Ser Glu Leu Trp Ala Tyr Ala Thr Asn Lys
65 70 75 80
Cys Asn Gly Lys Leu
85

<210> 13
<211> 255
<212> DNA
<213> Leiurus quinquestriatus

<400> 13
atgaaactgt tacttctgct aactatctca gcttcaatgc tgattgaagg cttagttaat 60
gctgacggat atataagagg aggcgacgga tgcaagggtt catgcgtgat aaatcatgtg 120
ttttgtgata atgaatgcaa agctgctggt ggctcttatg gatattgttg ggcttgggga 180
cttgctgct ggtgcgaagg tcttccagct gacaggggaat ggaagtatga aaccaataga 240
tgcggtggca aaaag 255

<210> 14
<211> 85
<212> PRT
<213> Leiurus quinquestriatus

<220>
<221> SIGNAL
<222> (1)..(21)

<400> 14
Met Lys Leu Leu Leu Leu Leu Thr Ile Ser Ala Ser Met Leu Ile Glu
1 5 10 15
Gly Leu Val Asn Ala Asp Gly Tyr Ile Arg Gly Gly Asp Gly Cys Lys
20 25 30
Val Ser Cys Val Ile Asn His Val Phe Cys Asp Asn Glu Cys Lys Ala
35 40 45
Ala Gly Gly Ser Tyr Gly Tyr Cys Trp Ala Trp Gly Leu Ala Cys Trp
50 55 60

Cys Glu Gly Leu Pro Ala Asp Arg Glu Trp Lys Tyr Glu Thr Asn Thr
65 70 75 80

Cys Gly Gly Lys Lys
85

<210> 15
<211> 255
<212> DNA
<213> Leiurus quinquestriatus

<400> 15
atgaaaataa taatttttct aattgtgtca tcattaatgc tgataggagt gaagaccgat 60
aatggttact tgcttaacaa agccaccggt tgcaaggtct ggtgtgttat taataatgca 120
tcttgtaata gtgagtgtaa actaagacgt ggaaattatg gctactgcta tttctggaaa 180
ttggcctggt attgcgaagg agctccaaaa tcagaacttt gggcttacgc aaccaataaa 240
tgcaatggga aatta 255

<210> 16
<211> 85
<212> PRT
<213> Leiurus quinquestriatus

<220>
<221> SIGNAL
<222> (1)..(19)

<400> 16
Met Lys Leu Leu Leu Leu Leu Ile Val Ser Ala Ser Met Leu Ile Glu
1 5 10 15
Ser Leu Val Asn Ala Asp Gly Tyr Ile Arg Arg Lys Asp Gly Cys Lys
20 25 30
Val Ala Cys Leu Phe Gly Asn Asp Gly Cys Asn Lys Glu Cys Lys Ala
35 40 45
Tyr Gly Ala Tyr Tyr Gly Tyr Cys Trp Thr Trp Gly Leu Ala Cys Trp
50 55 60
Cys Glu Gly Leu Pro Asp Asp Lys Thr Trp Lys Ser Glu Thr Asn Thr
65 70 75 80

Cys Gly Gly Lys Lys
85

<210> 17
<211> 61
<212> PRT
<213> Leiurus quinquestriatus

<400> 17
Asp Gly Tyr Ile Lys Arg Arg Asp Gly Cys Lys Val Ala Cys Leu Ile
1 5 10 15
Gly Asn Glu Gly Cys Asp Lys Glu Cys Lys Ala Tyr Gly Gly Ser Tyr
20 25 30
Gly Tyr Cys Trp Thr Trp Gly Leu Ala Cys Trp Cys Glu Gly Leu Pro
35 40 45

Asp Asp Lys Thr Trp Lys Ser Glu Thr Asn Thr Cys Glu
50 55 60